

(b) adding to the capture antibody:target molecule complex, an RNA or DNA aptamer detector molecule which binds to the target molecule to form a capture antibody:target molecule:aptamer ternary complex;

(c) when the aptamer is an RNA detector molecule, reverse transcribing the RNA to DNA;

(d) amplifying the DNA aptamer or DNA obtained by step (c) by PCR amplification; and

C2 (e) quantitating or detecting the PCR amplified DNA using a detectable non-primer probe which binds to the DNA using real time PCR during PCR amplification;

wherein quantitating or detecting the PCR amplified DNA quantitates or detects the presence of the target molecule when present at a concentration equal to or less than about 5000 pg/mL.

[Please add the following new claims:]

Sub D7 - -24. (New) The method of Claim 23, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration equal to or less than about 1000 pg/mL.

C3 25. (New) The method of Claim 24, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration equal to or less than about 100 pg/mL.

26. (New) The method of Claim 25, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration equal to or less than about 1 pg/mL.

Sub D8 27. (New) The method of Claim 23, wherein said quantitating or detecting the PCR

Sub
amplified DNA quantitates or detects the target molecule when present at a concentration of about 100 to about 5000 pg/mL.

28. (New) The method of Claim 27, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 100 to about 1000 pg/mL.

29. (New) The method of Claim 27, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 1000 to about 5000 pg/mL.

Sub D9
30. (New) The method of Claim 23, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 3 to about 5000 pg/mL.

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31. (New) The method of Claim 30, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 3 to about 1000 pg/mL.

32. (New) The method of Claim 30, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 3 to about 100 pg/mL.

Sub D10
33. (New) The method of Claim 23, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 0.4 to about 5000 pg/mL.

34. (New) The method of Claim 33, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 0.4 to about 1000 pg/mL.

35. (New) The method of Claim 34, wherein said quantitating or detecting the PCR

amplified DNA quantitates or detects the target molecule when present at a concentration of about 0.4 to about 100 pg/mL.

Sub D11 36. (New) The method of Claim 23, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 1 to about 5000 pg/mL.

37. (New) The method of Claim 36, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 1 to about 1000 pg/mL.

38. (New) The method of Claim 37, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 1 to about 100 pg/mL.

Sub D12 39. (New) The method of Claim 23, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 0.03 to about 5000 pg/mL.

G 40. (New) The method of Claim 39, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 0.03 to about 1000 pg/mL.

41. (New) The method of Claim 40, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 0.03 to about 100 pg/mL.

Sub D13 42. (New) The method of Claim 23, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 0.005 to about 5000 pg/mL.

43. (New) The method of Claim 42, wherein said quantitating or detecting the PCR

amplified DNA quantitates or detects the target molecule when present at a concentration of about 0.005 to about 1000 pg/mL.

44. (New) The method of Claim 43, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 0.005 to about 100 pg/mL.

45. (New) The method of Claim 44, wherein said quantitating or detecting the PCR amplified DNA quantitates or detects the target molecule when present at a concentration of about 0.005 to about 1 pg/mL.

46. (New) A method for quantitating or detecting the presence of a target molecule in a sample which may contain the target molecule and a nuclease, comprising:

(a) exposing the sample which may contain the target molecule to a capture antibody or target molecule binding fragment thereof which binds to the target molecule under conditions whereby a capture antibody:target molecule complex is formed;

(b) adding to the capture antibody:target molecule complex, an RNA or DNA aptamer detector molecule which binds to the target molecule to form a capture antibody:target molecule:aptamer ternary complex;

(c) washing the antibody:target molecule:aptamer ternary complex to remove said nuclease;

(d) when the aptamer is an RNA detector molecule, reverse transcribing the RNA to DNA;

(e) amplifying the DNA aptamer or DNA obtained by step (d) by PCR amplification; and

(f) quantitating or detecting the PCR amplified DNA using a detectable non-primer probe which binds to the DNA using real time PCR during PCR amplification;